

Claims
I Claim:

1. An electric drive unit (1), in particular for drives in a motor vehicle,

having an electric motor (15), which has a rotor (20) with a shaft (28) and has a pole housing (10),

wherein the pole housing (10) includes an end shield (43), with a motor bearing (45) for the rotor (20), and includes at least one magnet (32) and a short-circuit element (36),

and having a one- or multi-part gear housing (5), which is connected to the pole housing (10)

characterized in that

the pole housing (10) is in one piece with at least one part of the gear housing (5).

2. The electric drive unit of claim 1,

characterized in that

the pole housing (10) is at least partly of plastic.

3. The electric drive unit of claim 1 or 2,
characterized in that
the at least one magnet (32) is injected at least partly
into the pole housing (10).
4. The electric drive unit of one or more of claims 1
through 3,
characterized in that
the short-circuit element (36) forming a short circuit
for the at least one magnet (32) is injected at least partly
into the pole housing (10).
5. The electric drive unit of one or more of claims 1 or 4,
characterized in that
the short-circuit element (36) comprises at least two
shells.
6. The electric drive unit of one or more of claims 1 or 4,
characterized in that
the short-circuit element (36) is embodied in one piece.

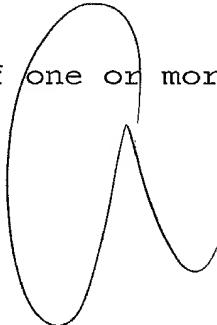
7. The electric drive unit of one or more of claims 1, 2 or 4 through 6,

characterized in that

the short-circuit element (36), comprising a mixture of plastic and magnetically conducted material, is injected into the pole housing (10).

8. The electric drive unit of one or more of claims 4 through 7,

characterized in that



the short-circuit element (36) has a protrusion (65), which is surrounded by the plastic comprising the pole housing (10).

9. The electric drive unit of claim 1 or 3,

characterized in that

the at least one magnet (32) has a protrusion (60) that is surrounded by the plastic comprising the pole housing (10).

10. The electric drive unit of one or more of claims 1, 2 or 4 through 8,

characterized in that

in the pole housing (10), the at least one magnet (32) is secured by positive engagement in the plastic of the pole housing (10) and by nonpositive engagement of the short-circuit element (36) located radially outward.

11. The electric drive unit of one or more of claims 1, 2, 3, 5, 6 or 9,

characterized in that

in the pole housing (10), the short-circuit element (36) is secured by positive engagement in the plastic of the pole housing (10) and by nonpositive engagement of the radially inner magnet (32).

12. The electric drive unit of one or more of claims 1 through 4 or 7,

characterized in that

the end shield (43) is embodied in one piece with the motor bearing (45),

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and

the end shield (43) is insertable into the pole housing (10).

13. The electric drive unit of one or more of claims 1 through 4, 7 or 12,

characterized in that

the rotor (20) has an axial longitudinal axis (30), and

the end shield (43) for the rotor (20) is disposed, axially positionably, on the pole housing in order to adjust the longitudinal play of the armature.

14. The electric drive unit of claim 13,

characterized in that

the end shield (43) is secured to the pole housing (10) by adhesive bonding.

15. The electric drive unit of claim 13 or 14,

characterized in that

the end shield (43) is secured to the pole housing (10) by ultrasonic welding.

16. The electric drive unit of one or more of claims 13 through 15,

characterized in that

the end shield (43) is secured to the pole housing (10) by a heat treatment.

17. The electric drive unit of one or more of the foregoing claims,

characterized in that

the shaft (28) is supported, oriented toward the gear housing (5), in an armature bearing (48) which is injected into the plastic of the pole housing (10).

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